TAXIING/GROUND PROCEDURES

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Taxiing is the controlled movement of the aircraft on the ground under its own power. Speed is controlled by the PCL; 1 direction is controlled by rudder, augmented as necessary by brakes.

INCLUDE THE FOLLOWING POINTS when pre-taxi checklist complete:

BEFORE TAXIING:
Left hand on PCL, right hand on the stick.
Check for fuel trucks - Do not taxi w/in 50', back taxi to avoid.
Do not use BETA in vicinity of ground personnel.

WHILE TAXIING:
Discuss use of rudder/brakes.
In the line area, taxi no faster than a person can walk. Check wingtips for taxi speed.
Use yellow lines in line area - lines guarantee clearance only from fixed objects.
Obstruction clearance is pilot's responsibility.
Control tower - field elevation, ALDIS lamp signals.
Clear of line area, may disregard yellow lines and taxi no faster than a person can trot.
Hub area: tetrahedron (8 kts), VORTAC, taxi/runway lights, crash truck on station.
Don't pass. Pass stopped a/c only w/approval of Ground and other pilot.
Right-of-way for outbound aircraft and emergency vehicles.
Primary and alternate runup areas/headings.
Turn in to first available spot and approach runup area sideline at a 90° angle.

IN THE RUNUP AREA:
During control check, be specific about how the control surfaces should move in relation to the stick and rudder.
Check for inbound traffic before leaving runup position.

Color and Type	On Ground	In Flight
Steady Green	Cleared for Takeoff	Cleared to Land
Flashing Green	Cleared to Taxi	Return for Landing
Steady Red	Stop	Give Way to Other Aircraft
Flashing Red	Taxi Clear of Runway	Do Not Land
Flashing White	Return to Starting Point	Not Used
Alternating Red and Green	General Warning Use Caution	General Warning Use Caution
Red Pyrotechnic	Not Used	Do Not Land

WIND SOCK:
Limp Less than 5 kts
45° 10 kts
Straight 15+ kts

AFTER LANDING:
Parking sign, taxi routes.

RESTRICTIONS ON BACK-TAXI
-w/in first 5 spots
-Lineman in sight
-Approval from Ground Control

TAKEOFF

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Takeoff is the movement of an aircraft from its starting point on the runway until it leaves the ground in controlled flight.

INCLUDE THE FOLLOWING POINTS:
Switch to *Tower* when 200' prior to the hold short line. *"CS, Takeoff"* when number one at the hold short and the aircraft ahead is on its takeoff roll.
Three possible clearances from *Tower*:
Cleared for Takeoff.
Hold Short.
Into Position and Hold.
Before taxiing onto any runway, look for landing traffic.
Select a reference point straight ahead.
Release the brakes and drop heels to the deck. Control heading with rudder and advance power to max allowable (3 sec.)
70-80 KIAS set takeoff attitude (cowl seam slightly below horizon), allow aircraft to fly itself off the deck at 80-85 KIAS.
Once airborne, reset takeoff attitude (cowl seam on the horizon).
When safe landing can no longer be made, check fuel caps secure and raise gear. Report gear up and locked.
Turn to departure heading over upwind numbers.
Level off at 700'-800' and talk trim for acceleration.
Clear of traffic pattern, change to CH 3 (278.8), *"Pens Dept, CS, Passing Alt."*
Transition to 120 KIAS climb (Exhaust Stacks on Horizon, 12°-15° UP) and trim.
Contact *Departure Control*, maintain 120 KIAS climb (Cowling Seam on Horizon, 6°-8° UP), and trim.

Rwy 5/14 Rwy 23/32
010° 340°

Altitude restrictions: Rwy 05/14 above 2700' by 6.5 DME
Rwy 23/32 above 2200' by 6.5 DME

At 4200' turn to:	Climb to:
Area 1: 270° until Hwy 29, then 230°	4500'
Area 2: 360°	5500'
Area 3: 180°	4500'

Squawk 1200

When clear of Class C:
"Departure, CS, Clear to the W (Area 1), N (Area 2), S (Area3). Cancel radar advisories."

Area 1 CH 7
Area 2 CH 8
Area 3 CH 9

Area 1:	Hwy 29	(17 DME)
Area 2:	Hwy 4	(12 DME)
Area 3:	I-10	(10 DME)

STRAIGHT AND LEVEL

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Maintain a constant altitude, airspeed and heading using the horizon as the primary reference.

INCLUDE THE FOLLOWING POINTS:

Horizon bisecting the windscreen, wingtips equidistant below the horizon.

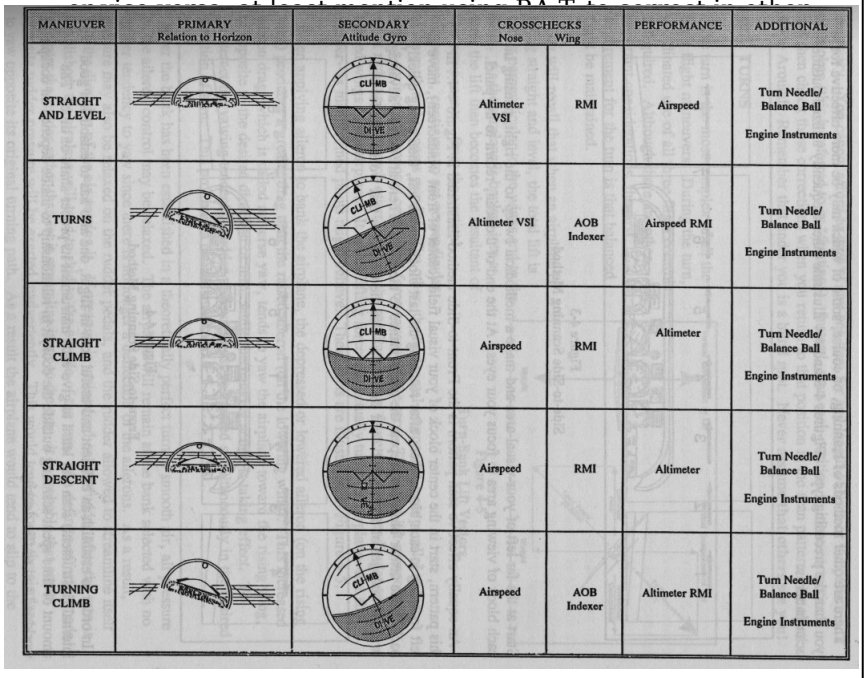
Scan outside for attitude, clouds, and traffic. Crosscheck RMI, altimeter/VSI, airspeed (one at a time).

Talk through scan evolution.

Fly and talk one altitude/airspeed deviation and one heading deviation.

Always stop the error and stabilize before making a correction.

NOTE: If your demonstration allows trading altitude for airspeed, [illegible] at least mention using PA-T-C to correct in other



SLOW FLIGHT/MINIMUM CONTROL MANEUVERS

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The slow flight maneuvers are designed to develop your ability to fly the aircraft in a near-stalled condition.

Perform 3 C's (do additional clearing turns during maneuver as required).

Narrate and perform all procedures.

PROCEDURES:

1. Trim for 90 KIAS, Gear DN, Flaps DN, Landing Lights ON.
2. Stall ✓List.
3. PCL--400#.
4. Slow to 25-26 Units AOA, 475#-500#.

RECOVERY:

1. Level, PCL--MAX.
2. Below 120 KIAS, Gear UP, Flaps UP (Do not raise flaps below 90 KIAS).
3. Autoignition--OFF.

P
A *INCLUDE THE FOLLOWING POINTS when stabilized at 25-26 units AOA:*
T
C Power required vs. airspeed (500# normally 100 KIAS with Gear/Flaps DN).
R
A Pitch attitude.
M Trim (full right rudder trim plus right rudder pressure).

Decrease in control effectiveness: demonstrate by "wiping out the cockpit".

Rate of turn--high, and radius of turn--small.

Adverse yaw. Turn w/o rudder, then coordinated turn.

Minimum controllable airspeed is not a set figure --will vary with weight, configuration and power setting.

Stall as a result of level turn: demonstrate by using AOB to actuate rudder shakers (26.5 $\pm$1/4 Units AOA).

Add power and hold nose at SFMCM attitude to demonstrate AOA decrease from prop wash and acceleration; then disregard AOA, clean up, and accelerate to normal cruise while maintaining altitude.

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BASIC TRANSITIONS

INCLUDE THE FOLLOWING POINTS:

Clearing turns required for climbs/descents greater than 1,000' (15° AOB for 30°)

Emphasize the P.A.T principle in all transitions.

Climbs of 1,000' or less will be done at max power and cruise airspeed.
Begin level off 50' prior.

Climbs more than 1,000' will be done at 120 KIAS.
Begin level off 200' prior.

All cruise descents are done at 300# and cruise airspeed.
Begin level off 100' prior.

Normal Cruise 600#-650# 150 KIAS
Fast Cruise 750#-800# 170 KIAS

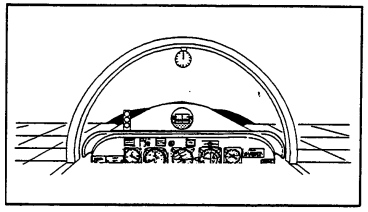

FIGURE 6-2a
Exhaust Stacks on Horizon
(12-15°)

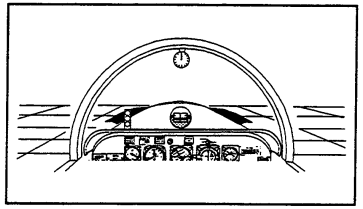

FIGURE 6-2b
Cowling Seam on Horizon
(6-8°)

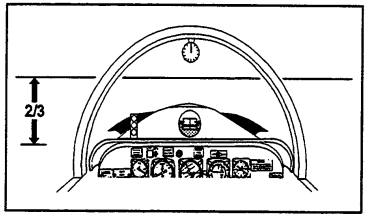

FIGURE 6-3a
En Route Descents - 150 Knots

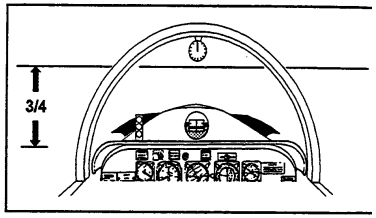

FIGURE 6-3b
En Route Descent - 170 Knots

TURN PATTERN

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The turn pattern is a series of constant angle of bank turns while maintaining altitude and airspeed.

PROCEDURES:

1. Straight and level on cardinal heading. Normal Cruise 600#-650# 150 KIAS.
2. Turn 30° w/ 15° AOB. Reverse turn for 30° w/ 15° AOB.
3. Reverse turn for 90° w/ 30o° AOB. Reverse for 90° w/ 30° AOB.
4. Reverse turn for 180° w/ 45° AOB. Reverse for 180° w/ 45° AOB.
5. Roll out original heading.

INCLUDE THE FOLLOWING POINTS:

Clear the area and use the horizon rolling into each turn, then cross-check the attitude gyro, altimeter/VSI.

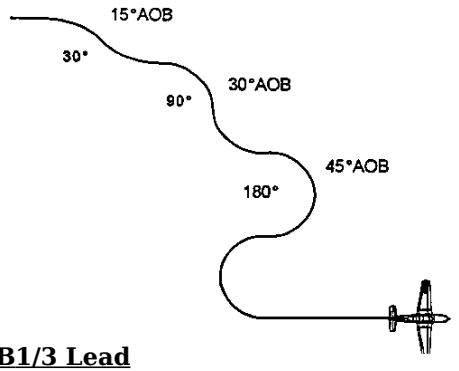
"1/3 rule" for reversals (lead rollout by 1/3 of AOB).

Very little back stick or power required for 15° AOB turns.

For 30° and 45° AOB turns, additional backstick and power required to maintain altitude and airspeed.

Forward stick pressure in reversals when rolling through wings level.

P.A.T. when returning to stra



Turn	AOB	1/3 Lead
30°	15°	5°
90°	30°	10°
180°	45°	15°

LEVEL SPEED CHANGE

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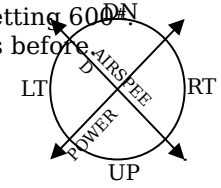
Level speed changes are taught to familiarize you with the various trim adjustments required with, changes in airspeed, power settings, and aircraft configuration.

PROCEDURES:

1. From normal cruise (150 KIAS, clean, 600#-650#); PCL to 300#, Gear DN (below 150 KIAS), approaching 100 KIAS, PCL to 500#-550#.
2. Landing ✓List.
3. Turns as given by IP (30° AOB max).
4. Reduce power 100#, below 120 KIAS lower flaps, approaching 90 KIAS, 600#.
5. Turns as given by IP (30° AOB max).
6. Power to MAX, airspeed below 120, Gear UP, Flaps UP, Lights OFF. Approaching 170 KIAS--750#-800#.

INCLUDE THE FOLLOWING POINTS:

Ballooning tendency when gear is lowered.
Talk trim while decelerating, then again after power is set at 500#-550#.
Stabilize and trim before landing checklist.
Make shallow AOB turns while discussing reduced control effectiveness at low airspeeds.
Talk trim as flaps extend and again after setting 600#.
Complete landing checklist and do turns as before.
Talk trim while accelerating to 170 KIAS.



	Power	Airspeed	Config	Trim
1. Normal Cruise	600#-650#	150 KIAS	Clean	
2. PCL	300#		Gear--DN	RT-UP
3. Downwind Configuration		500#-550#	100 KIAS	Gear--DN
4. Landing ✓List				
5. Turns (30° AOB Max)				
6. PCL Reduce by 100#			Flaps--DN	LT-UP
7. Landing Configuration		600#	90 KIAS	Gear--DN, Flaps--DN
8. Turns (30° AOB Max)				
9. PCL	1015#	170 KIAS	Gear--UP, Flaps--UP	DN
10. Fast Cruise	750#-800#	170 KIAS	Clean	

INTENTIONAL FEATHER WHILE AIRBORNE

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The propeller will be feathered while airborne to demonstrate the actual feathering characteristics compared with the simulated condition.

PROCEDURES:

This maneuver will not be performed by the student.

Maintain a minimum of 5,000' AGL over a hard surfaced runway.

1. Simulate feather (200#), 100 KIAS glide.
2. Note rate of descent (~800 fpm) and nose attitude.
3. Reduce PCL--IDLE.
   Note deceleration and increased rate of descent (~2,300 fpm).
4. Condition Lever--FTHR. Note acceleration and decreased rate of descent.
5. Condition Lever--FULL INCR. Note time for prop to spin up, and deceleration at flat pitch.

INCLUDE THE FOLLOWING POINTS:

Feather increases blade angle to a max pitch of 87.5°.
Propeller will continue to turn at ~200-300 RPM

Normal 100 KIAS rate of descent with prop feathered (clean) is approximately 800 fpm; unfeathered (clean) is 2,300 fpm.
NOTE: For accurate demo, make all rate of descent comparisons at the same angle of bank.

STALLS

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Stalls are taught to develop your ability to recognize a complete stall or an approaching stall and to recover correctly with a minimum lose of altitude.

NOTE: This discussion is required in flight only when called for as "Stalls Introduction" in the Master Curriculum Guide. Do it before the first stall checklist of the flight.

INCLUDE THE FOLLOWING POINTS:

Three C's: Configuration, Stall/Landing Checklist, Clearing turns.

Discuss the following stall warning signs:

SIGHT	Nose high, though stall can occur in normal attitude.
SOUND	Reduced wind sounds over the canopy.
CONTROL FEEL	Resistance to control movement decreases with airspeed.
KINESTHESIA	Sensing change of speed or direction.
RUDDER SHAKERS	Should actuate 5-10 kts above stall speed.

Caution the student: Stalls are practiced at altitude. If any warning signs are noticed when not intentionally stalling--recover immediately using MAX power.

Stall Checklist

1. Bilges--“Clear of loose objects, control lock stowed in 2 places.”
2. Restraint harness--“Adjusted, tight and locked.”
3. Autoignition--“ON.”
4. Engine Instruments--“Checked.”
5. Report--“Stall checklist complete.”

SKIDDED TURN STALL

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This maneuver demonstrates the excessive loss of altitude and unusual characteristics of a stall in unbalanced flight.

Scenario: Turning final, overshooting the runway, with AOB already at 30°. Bottom rudder applied to make the runway, nose raised to "stretch the glide".

Perform 3 C's.

Talk and perform procedures.

PROCEDURES:

This maneuver will not be performed by the student.

1. Trim for 100 KIAS (500#-550#), Gear--DN, Flaps--UP, Landing Lights--ON.
2. Stall ✓List.
3. Clearing turn 180° of turn, 30° AOB, last 90° to **Right**.
4. At start of last 90° turn, PCL--300# and 100 KIAS descent.
5. Apply excessive right rudder, use left aileron to hold 30° AOB. Raise nose, and reduce PCL to 200#.
6. Recover IAW OCF:
   - Positively Neutralize Controls.
   - PCL--IDLE.
   - Determine Aircraft Altitude.
   - Determine AOA, airspeed, and check turn needle.
   - Execute spin recovery technique if appropriate.
   - Execute unusual attitude recovery as appropriate.

INCLUDE THE FOLLOWING POINTS:

This maneuver will not be performed by the student.

Recover from out-of-control flight IAW NATOPS. If inverted, roll upright rather than pulling through (split-S).

Approximately 1,000’ will be lost - if this happens in the pattern, recovery would not be possible.

SPINS

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Aggravate a stall until the aircraft begins a nose-low, auto-rotation. Concentrate on orientation during the spin and recover after two turns. When rotation stops and assured of flying speed, commence a smooth pullout.

PROCEDURES:

1. Normal Cruise (150 KIAS, Clean, 600#-650#).
2. Stall ✓List.
3. Select ground reference point.
4. Clearing turn 180° of turn, 45° AOB.
5. Roll out pointed at reference point, PCL--200#.
6. Wings level, raise nose to 30°, PCL--IDLE.
7. At rudder shakers, add rudder in direction of clearing turn.
8. At full stall, full rudder and full back stick.

After two turns recover:

1. Full Opposite Rudder.
2. Stick Forward of Neutral.

When rotation stops:

1. Neutralize Controls.
2. PCL--IDLE.
3. Level wings.
4. Pullout (120 KIAS min, 4.5 g's max, 24 units AOA max).
5. Oil pressure--40 psi min.

INCLUDE THE FOLLOWING POINTS:

Perform 3 C's.

Select ground reference and count turns to help maintain orientation.

Push forward on stick until rotation stops (if light in seat gone too far).

Look up to horizon and use both hands while pulling out (avoids rolling pull out).

On recovery, 120 KIAS minimum, 24 units AOA and 4.5 g's maximum.

Fly straight and level <u>on the horizon</u> while completing post-spin procedures.

Spin indications:

80 KIAS - 100 KIAS.
AOA pegged at 30 Units.
Turn Needle pegged.
Fuel Lights may illuminate.

POWER OFF STALL

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Stall the aircraft in a power off condition to demonstrate the proper recovery when no power is available.

Scenario: After an actual or simulated engine failure, aircraft is stalled while stretching the glide to make a field.

Perform 3 C's.

PROCEDURES:

1. Normal Cruise (clean, 150 KIAS, 600#-650#), at or above 6,500' AGL (to recover by 5,000' AGL).
2. Stall ✓List.
3. Clearing turn 180° of turn, 45° AOB.
4. PCL--200#, approaching 100 KIAS set 100 KIAS glide attitude (horizon bisecting windscreen).
5. Raise nose to 10°-12° (exhaust stacks on horizon), and hold.
6. At stall (airframe buffet and nose pitching down slightly), release back pressure and allow nose to fall through 100 KIAS glide attitude, raise nose to 100 KIAS glide attitude.

Before raising the nose to stall, discuss 100 KIAS glide-attitude (horizon bisecting the wind screen).

Avoid secondary stalls during recovery.

APPROACH TURN STALL

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Stall the aircraft while simulating a landing approach and recover correctly with a minimum loss of altitude.

Scenario: Landing pattern, inside the 90°, stretching the glide to make the runway by raising the nose rather than adding power.
Perform 3 C's.
Talk and perform procedures.

PROCEDURES:
Departure from controlled flight shall be avoided.
1. At or above 6,500’ AGL, 90 KIAS, Gear--DN, Flaps--DN, Landing Lights--ON.
2. Stall ✓List.
3. Clearing turn 180° of turn, 30° AOB.
4. Roll out, PCL--300#, 90 KIAS descending attitude (horizon 2/3 way up canopy).
5. When established, raise nose to 10°-12° (lower exhaust stack on horizon), and reduce PCL--200#.
6. Recover--**Roll, Relax, Max, Ball Centered.** (Do not cycle rudders.)
   Raise nose to cowl seam just above horizon to stop altitude loss.
   Climb at 90 KIAS to next 500’ interval, maintain 90 KIAS (600#).

INCLUDE THE FOLLOWING POINTS:
Do not depart.
If depart use OCF procedures:
   Positively Neutralize Controls.
   PCL--IDLE.
   Determine Aircraft Altitude.
   Determine AOA, airspeed, and check turn needle.
   Execute spin recovery technique if appropriate.
   Execute unusual attitude recovery as appropriate.
Nose and wing attitudes before stall and after recovery.
Increased back stick pressure needed as airspeed decreases.
Execute recovery on buffet.
   Don’t drop nose below horizon.
   For Left Turns--Full right rudder to level wings (Left is easier).
   For Right Turns--Torque effect will assist in leveling wings (Power-Pause-Pedal).
RELAX back stick - LEVEL wings - MAX power - BALL centered simultaneously.
On recovery, raise nose to cowl seam just above the horizon to STOP THE AIRSPEED FROM ACCELERATING, check VSI for positive climb, THEN accelerate to 90 KIAS and climb out.

OUTLYING FIELD ENTRY

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The outlying field entry is a series of uniform procedures by which aircraft enter the landing pattern.

INCLUDE THE FOLLOWING POINTS
"Initial point" is the specified distance (Area 1--2 nm, 1,200’ MSL; Area 2--3 nm, Brewton 1,200 MSL, Evergreen 1,400’ MSL; Holley--N/A), on extended runway centerline and runway heading, wings level, at break altitude, 170 KIAS. It may also be another specific landmark (i.e. Grassy Point).

“_____RDO, CS, ____mile initial, runway ___, dual, Type Flight.”

OLF	Initial	Pattern	Ch
Area 1			
Saufley			
Barin	2 nm 1200’	Rt 900’	19
Silverhill	2 nm 1200’	Rt 900’	18
Summerdale	2 nm 1200’	Rt 900’	11
Wolf	2 nm 1200’	Rt 900’	384.2
Area 2			
Brewton	3 nm 1200’	Lt 900’	12
Evergreen	3 nm 1400’	Lt 1100’	15

Discuss interval, when to call for the break.

Break not earlier than upwind numbers (departure end).
1. 30° AOB.
2. PCL--300#.
3. Below 150 KIAS, Gear--DN.
4. Establish 3/4 Wingtip Distance (outboard aileron hinge) from runway.
5. Slow to 100 KIAS (trim RT-UP).
6. Approaching 100 KIAS, descend to pattern altitude (800’ AGL).
7. Level, 500#-550#.
8. Landing ✓List.

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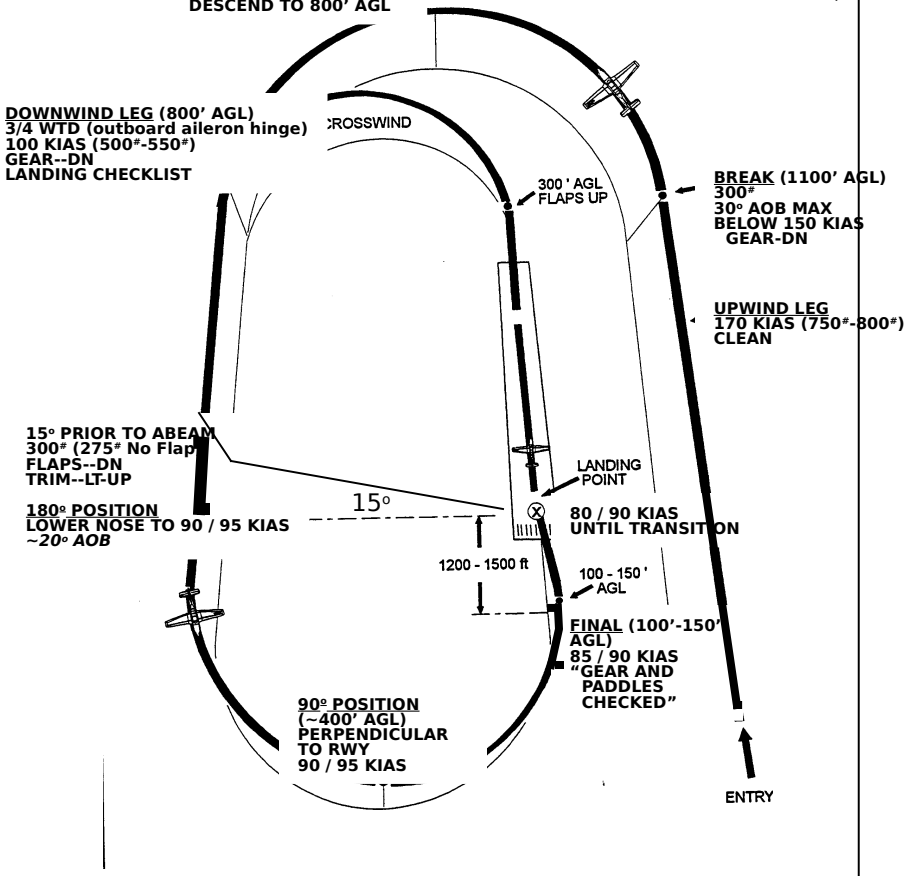

LANDING PATTERN

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NOTE: The pattern commences with the break or takeoff following a touch-and-go or Waveoff, and ends at the start of the approach turn.

INCLUDE THE FOLLOWING POINTS:

Turn downwind with interval, but not before **300' AGL** with **flaps up**.

30° AOB max in the pattern.

100 KIAS

Begin transition early to have the aircraft trimmed before the abeam position.

PPEL traffic has right-of-way over touch and go traffic.

APPROACH

Make a descending 180 degree balanced turn to final in the full flap or no-flap configuration. Control airspeed with nose attitude and rate of descent with power.

INCLUDE THE FOLLOWING POINTS:

Interval is established in the break or crosswind, NOT by varying the approach turn.

Talk airspeed, geographic references, and altitudes on downwind, at the 90° position, and on final.

PROCEDURES:

Downwind:

1. Landing ✓List prior to 180°.
2. 3/4 wingtip distance (outboard aileron hinge), pattern altitude, 100 KIAS (500#-550#). TRIM.

Transition (~15° prior to abeam):

1. 300# (275# for No Flap).
2. Flaps--DN.
3. Trim LT-UP

Approach Turn:

At 180° position (abeam touchdown point):

1. Lower nose to maintain 90 KIAS (95 KIAS No Flap), turn toward 90° position (30° AOB max).
2. 180° radio call.
3. Landing ✓List complete.

At 90° position (halfway around final turn):

1. 90 KIAS (95 KIAS No Flap), 400' AGL, perpendicular to runway.
2. Report Gear and Paddles Checked.

Final (1,200'-1,500' extended centerline [10-12 sec on final], 100'-150' AGL):

1. Maintain 80 KIAS (90 KIAS).

LANDING

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Land smoothly on the mainmounts at the intended point of landing on runway centerline.

INCLUDE THE FOLLOWING POINTS:

Approximately same nose high attitude as for takeoff.

Start the landing transition at 5’-10’ above runway. Ensure nose is aligned with the runway before touchdown. For touch-and-go, set the takeoff attitude as soon as power becomes available.

Landing Transition to Touchdown:

1. Approaching touchdown (5’-10’ above runway), PCL to IDLE.
2. Back stick pressure to land smoothly on mainmounts with nose high attitude.

Rollout:

1. Smoothly lower nose to ground.
2. Maintain directional control with rudders.
3. At taxi speed, turn off of runway.

Touch and Go Landing:

1. PCL--MAX. As engine spools-up, raise nose to takeoff attitude.
2. Execute normal takeoff, climb at 90 KIAS (100 KIAS No Flap).
3. At 300’ AGL, raise flaps, climb at 100 KIAS.
4. Number one with interval, call crosswind.
5. Transition to level, 100 KIAS downwind (500#-550#).

WAVEOFF

The waveoff is a set of standard procedures used to effect the safe discontinuation of an approach.

PROCEDURES:

1. PCL--MAX.
2. Level wings, center ball.
3. Raise nose to climb at 90 KIAS (100 KIAS No Flap).
4. Raise flaps at 300’ AGL, accelerate to 100 KIAS.
5. Move to either side of runway to avoid conflicts and keep aircraft in sight.
6. With interval, call crosswind or depart pattern.

INCLUDE THE FOLLOWING POINTS:

A waveoff may be initiated by the pilot, or directed by the RDO, wheels watch, tower, IP, or another aircraft.

At an OLF, offset if necessary to keep traffic on the runway in sight or to avoid conflicting traffic.

At home field, always offset to the tower side.

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DELTA PATTERN

- Racetrack pattern oriented around duty runway for arriving/departing civilian traffic.
- Circular pattern extended to airport perimeter for runway change.
- 1400’ (1200’ / 900’ at Saufley).

To enter racetrack DELTA (civilian traffic):

- Climb from current position to Delta Pattern altitude and maintain interval.
- Maintain 100 KIAS, Gear--DN, Flaps--UP, 1/4 WTD (double row of rivets) outboard of duty runway on upwind leg.

To re-enter pattern:

- Descend to pattern altitude abeam upwind numbers (departure end), established on downwind.

To enter circular DELTA (runway change):

- When number one upwind, climb from current position to Delta Pattern altitude.
- Be established at 1400’ by 180° position.

OUTLYING FIELD DEPARTURE

The outlying field departure is a series of uniform procedures by which aircraft depart the pattern.

PROCEDURES:

1. Ensure number one upwind (departure end).
2. Above 300’ AGL with Flaps UP, call departing. *“RDO, CS, number one upwind departing.”*
3. PCL--MAX.
4. Below 120 KIAS, Gear--UP, Landing Lights--OFF.
5. Climb to departure altitude and accelerate to 170 KIAS, or climb at 120 KIAS.

INCLUDE THE FOLLOWING POINTS:

If pattern altitude is reached before being number one upwind, reduce power to maintain 100 KIAS.

Criteria for being "number one upwind" for departure does not require interval.

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HAPL

The simulated High Altitude Power Loss (HAPL) will be initiated above 2,500 ft. AGL by the instructor reducing power to idle and informing the student he has a simulated power loss. The HAPL may occur at any airspeed and configuration. Fly to intercept the ELP profile while simultaneously executing the appropriate procedures.

INCLUDE THE FOLLOWING POINTS:

Wind - Determine direction and velocity by local indications (windsock, tetrahedron, smoke, cattle face into wind). If nothing is visible, use last known wind. If wind is calm, state an assumed wind.

Field Selection - Best landing site is an airfield. Otherwise, largest "reachable" field, aligned with the wind. The next best site is a hard-packed surface. A cultivated field is normally smooth and free of livestock, but landing direction should be aligned with the furrows and the wind. Watch out for power lines, livestock, ditches, etc. If nothing is available, consider bailout, altitude permitting. (1200' Controlled, 2000' Night/VMC, 5000' Uncontrolled)
When out of airspeed, altitude, and ideas, land in the trees or ditch if near a large body of water.

Engine indications - briefly review flameout, frozen engine, and rollback.
N_1 at 0%--**Frozen**, Condition Lever--FUEL OFF.
N_1 at 12%--**Flameout**, attempt AIRSTART.
N_1 above 40%--**Rollback**, Use EPL.

Set yourself up for the maneuver by choosing a field and positioning yourself before initiating. Initiate by announcing "you have a simulated power loss" and reduce the PCL to IDLE.
Start going through ENGINE FAILURE procedures.
When engine instruments are checked, read actual N_1 off gauge, IP will then give a simulated N_1.

Attempt airstart if conditions warrant, at / above 1,500' AGL.

Enroute to High Key, demonstrate or at least discuss the ways to lose excess altitude (bow-ties, S-turns, slip, lower gear or flaps).

Fly to intercept the ELP at High Key. If off altitude at any checkpoint, talk briefly about the corrections you are making, and continue. Do everything possible to fly a good ELP ground

APPROACH TO HIGH KEY

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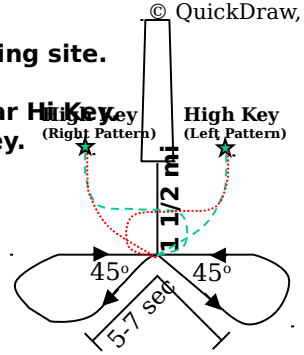
Enter Bowties 1 1/2 mi off end of landing site.
@ 3,500' AGL turn toward High Key.
If at or below 3,500' AGL go to near Hi Key.
If above 3,500' AGL go to far Hi Key.
Then execute ELP.



SIMULATED ELP

Most common error High and Tight (30°-35° AOB at High Key).
From 1,500' AGL High Key, 30° AOB with Flaps UP will make field.

Transition--100 KIAS
Gear/Flaps--UP
Check--Engine Instruments
Condition Lever--FTHR (PCL--200#)
Select--Landing Site
Harness--LOCKED
AIRSTART (if N_1 ~12%)
PCL--IDLE
T-Handle--DOWN
Standby Fuel Pump--ON
Starter--ON
N_1 and ITT--MONITOR
Starter--OFF
Successful Start
Condition Lever--FULL INCR
PEL--EXECUTE
Bailout (if no start, no landing site)
If forced landing is continued:
Condition Lever--FUEL OFF
T-Handle--PULL
MAYDAY / 7700
ELP profile

Flaps or Gear DN between High Key and Crosswind Allow sufficient time to crank gear down
Perform Landing Checklist

ROSSWIND
2000' AGL, 100 KIAS
Crossing the landing line
Gear--DN (prepared surface only)
Flaps--DN (unprepared surface)
Increase to 20°-24° AOB

1. HIGH
2500' AGL, 100 KIAS
1/4 WTD (double row of Clean
Report "HIGH KEY"
Wait 3 sec to start turn
Use 10°-12° AOB

5. FINAL
1200'-1500' Final, 90/95 KIAS
Gear--DN (prepared surface only)
Flaps--DN (unprepared surface or if field is made)
Canopy--BLOWN
Battery--OFF

Execute waveoff NLT 500' AGL
Climb @ 100 KIAS to LOW KEY

3. LOW KEY
1200' AGL, 100 KIAS
2/3 WTD (mid-aileron hinge)
Gear--DN (prepared surface only)
Flaps--DN (unprepared surface or when field is made if landing on prepared surface)
Report "LOW KEY"
Level wings, then
Use 10°-12° AOB

4. 90° POSITION
600'-800' AGL, 100 KIAS
Gear--DN (prepared surface only)
Flaps--DN (unprepared surface)
Increase to 20°-24° AOB

LAPL/P

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The simulated Low Altitude Power Loss in the pattern will be initiated above 800 ft. AGL by the instructor reducing the power to 200 ft-lbs and informing the student there is a simulated power loss.

INCLUDE THE FOLLOWING POINTS:

Stress airspeed control and completing the first six steps simultaneously when practical.

Do additional procedures for LAPL as time allows.

Never turn more than 90° for a field.

Waveoff at 500’ for unprepared surfaces.

LAPL/P to off duty runway only when no other aircraft are in pattern and with RDO approval. ***Low approaches only.***

Transition--100 KIAS
Gear/Flaps--UP
Check--Engine Instruments
Condition Lever--FTHR (PCL--200#)
Select--Landing Site
Harness--LOCKED

Point--Turn to Field
Dump--Lower nose to 100 KIAS
Suck--
200# and Flaps--UP
If N_1 above 40%
EPL--ENGAGE
If N_1 below 12%
Condition Lever--FTHR / FUEL OFF
MAYDAY

LAPL

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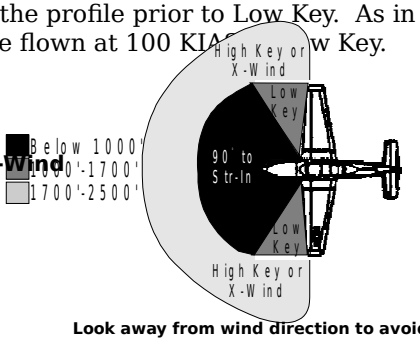
The simulated Low Altitude Power Loss will be initiated between 800 and 2,500 ft. AGL by the instructor reducing power to idle and informing the student he has a simulated power loss (if below 1,000 ft. AGL the instructor will set 200 ft-lbs).

NOTE: For training purposes in the SFAM syllabus, initiate from normal cruise with sufficient altitude to complete an airstart. For a good demo, intercept the profile prior to Low Key. As in the HAPL, waveoff should be flown at 100 KIAS [illegible]w Key.

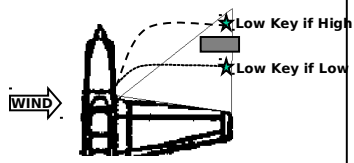
Hardest Parts:
Field Selection
Getting to Field

2500’-1700’ High Key or X-Wind
1700’-1000’ Low Key
Below 1000’ 90° or Str-In



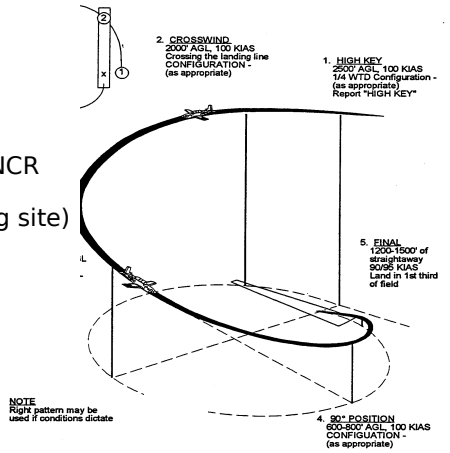
Look away from wind direction to avoid ta

Transition--100 KIAS
Gear/Flaps--UP
Check--Engine Instruments
Condition Lever--FTHR (PCL--200#)
Select--Landing Site
Harness--LOCKED



AIRSTART (if N_1 ~12%, above 1200’ AGL)
PCL--IDLE
T-Handle--DOWN
Standby Fuel Pump--ON
Starter--ON
N_1 and ITT--MONITOR
Starter--OFF
Successful Start
Condition Lever--FULL INCR
PEL--EXECUTE

Bailout (if no start, no landing site)
If forced landing is continued:
Condition Lever--FUEL OFF
T-Handle--PULL
MAYDAY / 7700
ELP profile



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Utilize the PEL procedure to ensure that a safe landing at a paved field can be made if indications of an impending engine failure should occur.

INCLUDE THE FOLLOWING POINTS:

Power is always available in PPEL: use 1015# / 850# any time you are not within gliding distance of High Key or "below profile" after intercepting ELP.

Once power has been reduced to 200#, use max allowable power and 100 KIAS to climb.

Ways to lose excess altitude (S-Turns, Slip, Gear/Flaps, Power-last resort).

Gear down with landing checklist complete no later than High Key (start early if emergency gear extension is necessary).

Initial turn off of High Key and Low Key should be at shallow AOB (10°-12°), then varying as necessary.

Flaps should be lowered at Low Key (unless situation dictates no-flaps). If not in position to lower flaps by the 90°, add power to regain the profile, then lower flaps.

PPEL/P

Utilize PEL procedure if indications of an impending engine failure occur while in the landing pattern.

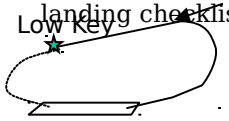
INCLUDE THE FOLLOWING POINTS:

Instructor will initiate maneuver at or above 500' AGL with interval, and make the crosswind call.

Initiate a climbing turn (Gear-UP) to a position within gliding distance of any available runway. Then continue to low key for the duty runway using normal ground track. Climb no higher than ~1700'-1800'.

Reduce power, nose over, lower the gear, and complete landing checklist prior to patterned low key.

Low Key



@1700'-1800'
Power--Back
Nose--Over
Gear--DN

PCL--MAX Allowable or 850#
CLIMB--at 100 KIAS to ~1700'-1800'
CLEAN--Gear and Flaps--UP
CHECK--engine instruments
DETERMINE--duty runway already known
DELIVER--"PAN-PAN"
REDUCE--PCL to 200# when ~1700'-1800'
GEAR--DN
LANDING CHECKLIST--Complete

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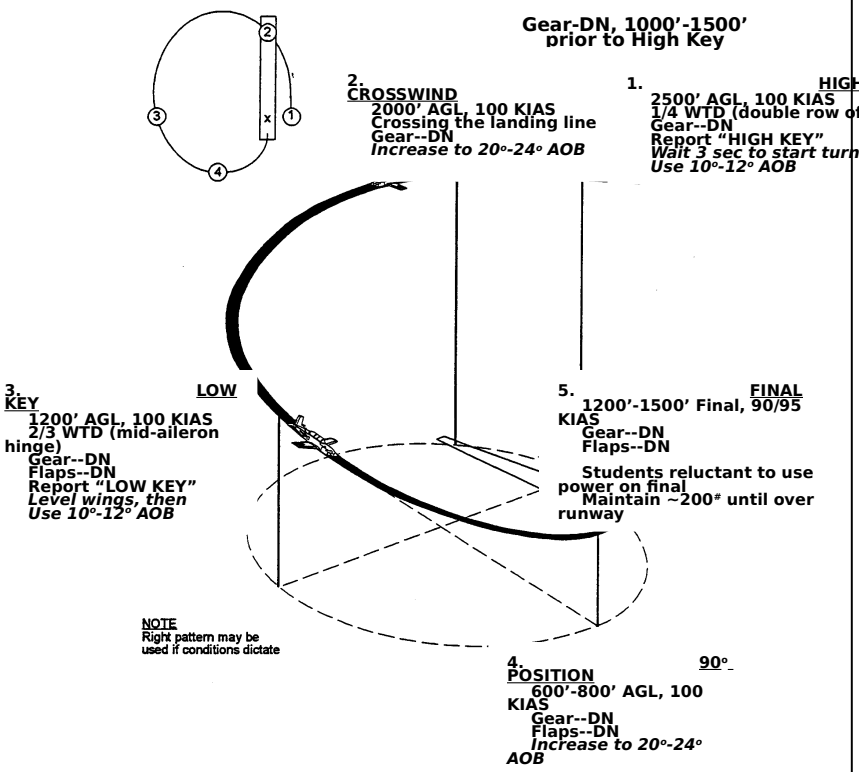
Most common error reluctant to add power.
When adding power use 1015# or 850#.
PEL is steeper than normal approach.
Do not reduce PCL below ~200# until over runway.



TURN--to nearest paved field
CLIMB--to within glide distance of High Key
CLEAN--Gear and Flaps--UP
CHECK--engine instruments
DETERMINE--duty runway
DELIVER--"PAN-PAN"
REDUCE--PCL to 200# when field is made
GEAR--DN prior to High Key
LANDING CHECKLIST--Complete

SLIP DEMO

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Set up demo at 100 KIAS, gear up, flaps down.

Apply slip inputs smoothly. Stress wing down, top rudder.

Compare rate of descent in and out of balanced flight.

Do a straight slip and a turning slip using full rudder.

Note that a turning slip will give higher rate of descent.

Using slips in the ELP, use caution in excess of 30° AOB.

EPL DEMO

INCLUDE THE FOLLOWING POINTS:

EPL is used to regain control of the engine after certain fuel control malfunctions.

Advance/retard EPL slowly.

Gear warning horn will sound when PCL/EPL are both above 75% N_1. Torque increases in climbs, decreases in descents (opposite of PCL).

FAMILIARIZATION FLIGHT TERMINOLOGY

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FAST CRUISE	170 KIAS (clean) Power as required (750#-800#)
NORMAL CRUISE	150 KIAS (clean) Power as required (600#-650#)
NORMAL CLIMB	120 KIAS (clean) Max allowable power (1015#/695°C) Attitude: cowl seam on horizon
EN ROUTE DESCENT	Normal cruise airspeed, 150 KIAS Power 300#
FAST CRUISE EN ROUTE DESCENT	Fast cruise airspeed, 170 KIAS Power 300#
DOWNWIND CONFIGURATION	100 KIAS, gear down, flaps up Power as required (500#-550#) Landing lights ON
LANDING APPROACH CONFIGURATION (LAC)	90 KIAS, gear down, flaps down Power as required (600#) Landing lights ON
MAX ALLOWABLE (POWER)	Torque set to 1015#, monitor ITT so as not to exceed 695°C Prop RPM 2200±25
WINGTIP DISTANCES	
One wingtip	Wingtip
3/4 wingtip	Outboard aileron hinge
2/3 Wingtip	Middle aileron hinge
1/2 wingtip	Fuel cap
1/3 wingtip	Fuel cell access panel inboard of fuel cap.
1/4 wingtip	Between wing root and fuel access panel (also the double row of rivets).

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TAXIING is the controlled movement of the aircraft on the ground under its own power. Speed is controlled by the PCL; direction is controlled by rudder, augmented as necessary by brakes.

TAKEOFF is the movement of an aircraft from its starting point on the runway until it leaves the ground in controlled flight.

STRAIGHT AND LEVEL (S&L): Maintain a constant altitude, airspeed and heading using the horizon as the primary reference

TURN PATTERN: The turn pattern is a series of constant angle of bank turns while maintaining altitude and airspeed.

LEVEL SPEED CHANGES (LSC): are taught to familiarize you with the various trim adjustments required with, changes in airspeed, power settings, and aircraft configuration.

SLOW FLIGHT MINIMUM CONTROL MANEUVERS (SFMCM): The slow flight maneuvers are designed to develop your ability to fly the aircraft in a near-stalled condition.

STALLS: are taught to develop your ability to recognize a complete stall or an approaching stall and to recover correctly with a minimum loss of altitude.

POWER OFF STALL (POS): Stall the aircraft in a power off condition to demonstrate the proper recovery when no power is available.

APPROACH TURN STALL (ATS): Stall the aircraft while simulating a landing approach and recover correctly with a minimum loss of altitude.

SKIDDED TURN STALL (STS): This maneuver demonstrates the excessive loss of altitude and unusual characteristics of a stall in unbalanced flight.

SPINS: Aggravate a stall until the aircraft begins a nose-low, auto-rotation. Concentrate on orientation

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INTENTIONAL FEATHER WHILE AIRBORNE: The propeller will be feathered while airborne to demonstrate the actual feathering characteristics compared with the simulated condition.

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PPEL: Utilize the PEL procedure to ensure that a safe landing at a paved field can be made if indications of an impending engine failure should occur.

PPEL/P: Utilize PEL procedure if indications of an impending engine failure occur while in the landing pattern.

OUTLYING FIELD ENTRY (OLE): The outlying field entry is a series of uniform procedures by which aircraft enter the landing pattern.

APPROACH: Make a descending 180 degree balanced turn to final in the full flap or no-flap configuration. Control airspeed with nose attitude and rate of descent with power.

LANDING: Land smoothly on the mainmounts at the intended point of landing on runway centerline.

WAVEOFF: The waveoff is a set of standard procedures

TRAINING AREAS AND MOAs

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FWOP CH 4

EMERGENCIES

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Swk 7700.
Maintain VMC, if able.
Notify Tower or Approach of intentions.
Notify squadron FDO, if conditions permit.
Land at nearest suitable field.
Emergency and Precautionary landings use full runway length.

Gear up landings:
- Enter North Field emergency pattern, obtain in-flight check.
- Land at South Whiting Field, if possible.
- In two-way communicationwith RDO and Stan/NATOPS check pilot.
- Fire, ambulance, crash, and salvage equipment in place.
- Minimum of one low pass prior to landing approach.

NORDO

Swk 7600.
Make radio calls “in the blind.”

VFR

Overfly North Field at or above 3500’ to determine duty runway.
Execute PPEL to duty runway.
Rock wings at High Key.
Approaching Low Key, look for ALDIS signals form tower.

IFR

If IMC, maintain last assigned altitude, proceed to TACAN IAF and execute approach for active runway.

If VMC, proceed VFR to NSE or OLF and land. If unable, swk 7600 and execute appropriate TACAN approach.

EMERGENCY ORBIT PATTERN

Used for landing gear emergencies requiring visual inspection or special assistance, and if unable to maintain 170 KIAS.

Enter racetrack pattern over duty runway at 2500’ and 120 KIAS. Coordinate with Tower to switch to FDO frequency.

Notify Tower when ready to depart emergency orbit pattern. When cleared by Tower, descend to 180° position on downwind leg.

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NSE PATTERN / EMERGENCY PATTERN / DISCONTINUED ENTRY

NSE ARRIV

GENERAL WEATHER RECALL

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